CLAIMS

1. A pharmaceutical composition comprising An acceptable pharmaceutical vehicle and an element chosen from the group consisting of a nucleotide sequence encoding a protein of the ONECUT family characterized by the presence of a single CUT domain and the presence of an F48M50 dyad in the homeo domain, a vector comprising this nucleotide sequence, the protein sequence encoded by this nucleotide sequence and/or a cell line transformed with said vector and expressing said protein of the ONECUT family.

2. The pharmaceutical composition as claimed in claim 1, characterized in that the protein of the ONECUT family is HNF-6 in its two isoforms.

3. The pharmaceutical composition as claimed in claim 1, characterized in that the protein of the ONECUT family is OC-2, the amino acid sequence of which is SEQ ID No. 2.

4. The cellular pharmaceutical composition as claimed in claim 1, characterized in that the protein of the ONECUT family is OC-3, the amino acid sequence of which is SEQ ID No 3.

5. The pharmaceutical composition as claimed in any one of the preceding claims, characterized in that said nucleotide and polypeptide sequences are human nucleotide and polypeptide sequences.

6. The pharmaceutical composition as claimed in any one of the preceding claims, characterized in that the vector is chosen from the group consisting of plasmids, viruses, phagemids, lipid vesicles, in particular cationic vesicles, liposomes or a mixture of these.

7. The use of the pharmaceutical composition as claimed in any one of the preceding claims, for preparing a medicinal product intended for the prevention and/or for the treatment of type 1 or type 2 diabetes or of disorders linked to diabetes, for the

prevention and/or for the treatment of cancer, in particular of melanoma, and for the prevention and for the treatment of Waardenburg syndrome.

8. A method of therapeutic treatment of a patient, preferably of a human patient, likely to develop or suffering from diabetes, from a cancer, in particular from a melanoma, or from Waardenburg syndrome, characterized in that the pharmaceutical composition as claimed in any one of claims 1 to 4 is administered ex vivo by isolating a body fluid or one or more cells from the patient, treating said cells or the cells present in this body fluid with the pharmaceutical composition of the invention or with the vector included in this pharmaceutical composition, and reinjecting into said patient the transformed cells.